Commodity dependence and risk management in CDDCs

By

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Overview
Commodity markets feature a range of risks

- **Price risk**
- **Production risk**
- **Transportation risk**
- **Counterparty risk**
- **Currency risk**
- **Weather and climate-related risks**
Commodity price risk
Commodity prices are volatile (1/6)

UNCTAD Commodity Price Indices (2015=100)
Commodity prices are volatile (2/6)

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Commodity prices are volatile (3/6)

UNCTAD Commodity Price Indices (2015=100)
Commodity prices are volatile (4/6)

Monthly percentage changes of UNCTAD Commodity Price Index (all groups)
Commodity prices are volatile (5/6)

- 59% of the monthly changes from February 2000 to February 2019 were positive; 41% were negative

- 56% of the shocks with an absolute value above 5% were positive; 44% were negative

- The average size of negative shocks was -4.3%; the average size of positive shocks was 3.9%

- Large positive shocks followed by large negative shocks create problematic environment
Commodity prices are volatile (6/6)

Coefficient of variation of UNCTAD commodity price indices (Jan 2000 - Feb 2019)
Why are volatile commodity prices a problem?

- Price volatility creates uncertainty for governments, commodity producers, traders and exporters

- Threat to the sustainability and continuity of public development programmes

- Risk for the achievement of SDGs in commodity-dependent developing countries
Burden of volatility passed on producers, mostly....

Market concentration along the Global Coffee Value Chain

25 million coffee producers & workers

BIG 5 TRADERS (40% market)

2 MAJOR ROASTERS (¼ market)

30 RETAILERS

500 million coffee consumers daily

Source: UNCTAD secretariat
Addressing price risk
International commodity agreements

- ICAs for sugar, coffee, cocoa and natural rubber

- Objective: Stabilize prices by quotas & buffer stock

- Dismantled or ceased to intervene in market in 1980s & 1990s

- Also agricultural marketing boards abolished or scaled back
Financial instruments to hedge commodity price risk (1/2)

- **Futures** - standardized, exchange-traded contracts to buy or sell a commodity at a specified future date

- **Forward contracts** - non-standardized, generally OTC-traded agreement of a future sale of a commodity

- **Options** - Right but not an obligation to buy or sell a commodity at a pre-specified price

- **Swaps** - exchange of cash flows based on the price of a commodity
Financial instruments to hedge commodity price risk (2/2)

• Use financial instruments to hedge commodity price risk not widespread in CDDCs

• A few examples for commodity exporters
  – Mexico oil hedge
  – Petrobras oil hedge
  – Codelco copper hedge

• Also some commodity importers used financial instruments to hedge price risk
  – Ghana, Jamaica, Morocco, Uruguay oil hedge
  – Malawi maize hedge
Example: Mexican oil hedge program

- Mexico has used derivatives (options) to hedge price of oil exports since 2000; seen as world's largest sovereign derivatives trade

- Options exercised 3 times: 2009 (payout: $5 billion), 2015 ($6.4 billion) and 2016 ($2.7 billion)

- For 2019, Mexico placed $1.23 billion in put options to lock in an export price of $55 per barrel

- Benefits: less volatility in oil revenue and lower sovereign risk (thus lower borrowing costs)
Commodity exchanges in developing countries

• Regulated market places where commodities and derivatives are traded

• Enhance market access and provide physical infrastructure

• Price discovery, risk management and facilitation of trade
Commodity SWFs and precautionary saving

• Accumulate savings during periods of high prices to enhance resilience during times of low prices

• Stabilization
  – shield budget from shocks and volatility of commodity revenue
  – support countercyclical fiscal policy rules

• Saving
  – risk management through diversification of assets
  – accumulation of assets improves net debt position, which reduces financing costs
Commodity-linked bonds

- Link debt obligations to repayment ability

- Coupon rates, principal repayments or payment schedules could be linked to commodity prices

- Debt payments vary with the price level of export commodities

- Examples: Mexican Petrobonds, Sonatrach oil-linked loan

- Challenges: no existing liquid market, high risk/novelty premiums, political concerns
Weather and climate risk
Weather is a key source of risk for farmers

- Particularly smallholder farmers are vulnerable to weather-related shocks

- Such risks often uninsured, leading to inefficient coping strategies:
  - Sell productive assets such as livestock or land
  - Reduce spending on education or health
  - Decrease food consumption
Insuring weather and climate-related risk
Index-based weather insurance

- Based on weather-related indices such as rainfall or temperature
- Trigger a payout if a threshold level of the index is surpassed
- Lower transaction costs than indemnity-based insurance
- Implemented in countries e.g. Bangladesh, Burkina Faso, Ethiopia, India, Kenya, Malawi, Mexico, Nicaragua, Rwanda, Senegal, Thailand, & Viet Nam
- Low take up often a challenge
Index-based weather insurance: Examples

- Index-based weather insurance piloted in India in 2003
  - adopted by government in 2007
  - 12 million farmers, 40 different crops over 15 million hectares covered

- Kilimo Salama project started in 2009 with a pilot insuring 200 farmers in Kenya against drought and excess rain
  - expanded to Rwanda in 2012 and to Tanzania in 2013
  - covered 187,000 farmers in three countries by the end of 2013
  - project transformed to commercial provider in 2014
Summary
Summary and policy considerations (1/3)

• Commodity markets are volatile and therefore a source of risk and uncertainty for CDDCs

• Risk management tools for governments include financial instruments, precautionary saving and commodity-linked debt instruments

• Commodity exchanges can help smallholder farmers, traders and exporters to manage commodity-related risk
Summary and policy considerations (2/3)

- Index-based weather insurance can protect smallholder farmers from weather and climate-related shocks.

- These instruments should be widely used but require training.

- Raising incomes of most vulnerable, in line with the SDGs, is crucial to strengthen economic and social resilience of households.

- Diversification is most direct way to reduce dependence on commodities, mitigate risk & increase macroeconomic resilience.
Summary and policy (3/3): fairer distribution of value
Thank you.

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